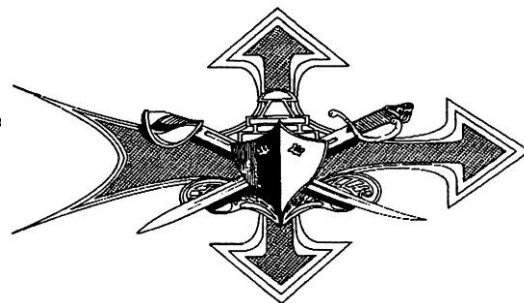


# SHIPS' SAFETY BULLETIN

Prepared by Naval Safety Center  
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**OCT-DEC 2011**

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Suggested routing should include CO, XO, department heads, division officers, CMC, CPO mess, petty officers' lounge, work-center supervisors, and crew's mess. Blanks provided for initials following review:

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## Improper Use of Magazines throughout the Fleet

*By GMC Ramiro Salas  
Naval Safety Center*



It's disturbing to see that four of five surveys conducted onboard any class of ship has at least one or more improper use of magazine violations. I'm not sure where our ordnance safety culture has changed; whether it's a lack of space, ignorance, no support from the Chain of Command, or the just plain "I don't care" attitude. What I am sure of is that this behavior has to come to a stop. This action violates the safety of our crews and it breeds a low standard of

explosive safety awareness to our next generation.

NAVSEA OP4 Rev 9, Chapter 3 gives very clear instruction on the use and permissible stowage of magazines with or without explosive ordnance. It also contains detailed procedures in the event that your ship would like to deviate from the instruction.

Don't let your ship be the next major explosive ordnance mishap.

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## AWP Operations Require ORM

*By LT Edward Alexander  
Naval Safety Center*

During safety surveys, we routinely see personnel working over the side on ships from AWP (aerial work platforms); or more commonly, JLGs. One look at the area surrounding the operations can reveal whether the ship is complying with the requirements of OPNAVINST 5100.19E, Navy Safety and Occupational Health Program Manual for Forces Afloat, or not. Paragraph C0806 of OPNAVINST

5100.19E contains specific requirements for work to begin with AWP. A few of the requirements are:

The operator of any AWP must be licensed according to local instructions. Those instructions must include the requirements in NAVFAC P-300 and completion of PQS (NAVEDTRA 43127-C) watch station 311.

- A "Working Over the Side" chit must be routed through the chain of command and posted on the quarterdeck.

- A paint punt must be placed in the water near the lift operations.

- All personnel in the basket of the AWP must wear a safety harness and safety lanyard at all times.

- All personnel in the basket of the AWP must wear an inherently buoyant life preserver.

You can find safety precautions required for safe AWP operations in paragraph C0806 of OPNAVINST 5100.19E. Don't let your AWP operations look like the picture below.



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#### **Air Conditioning sight glasses; see what they are telling you?**

*By CWO4 Danny L Royse*

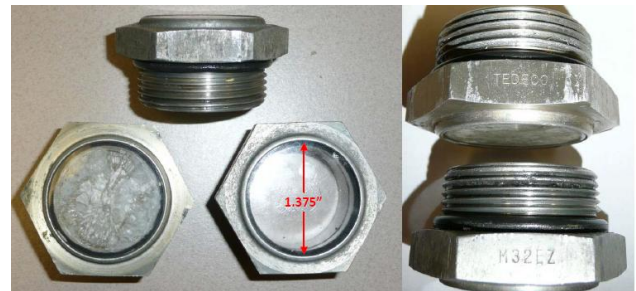
*Naval Safety Center*

While providing technical assistance to a ship, NSWCCD-SSES engineers noted that faulty sight glass plugs with aluminum bodies and acrylic lens were installed on some air conditioning (AC) plants. These incorrect sight glass plugs stamped "TEDECO" or "M32EZ" are not designed for the normal operating temperatures or pressures and are manufactured with material that is not compatible with refrigerant.

Follow these procedures for inspecting all AC&R sight glass plugs.

- a) Any AC sight glass with cracking, crazing or bubbling is considered manufactured of non-conforming plastic material. Look for "TEDECO" or "M32EZ" stamped on edge of plug. See photo.

- b) If faulty sight glass plugs are found, perform local atmospheric sampling to determine if there is any leakage. Non-conforming sight glass plugs shall be documented via a **departure from specification (DFS)** and replaced as soon as practicable.



Pressures on the AC plant sight glasses are actually highest when the plant is offline and charged with refrigerant. Reducing the pressure on the non-

conforming sight glasses may be achieved by of three methods:

- 1) Operate the AC plant.
- 2) Evacuate the AC plant and place unit under a 5 psig nitrogen blanket.
- 3) Align the chill water system to provide sufficient flow to maintain evaporator temperature approximately equal (within 5 deg-f) to chill water temperature.

For access to this advisory, reference GENADMIN message R 151300Z OCT 11.

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**Can you get out, or is your route blocked?**

*By DCC(SW/AW) John Ralston  
Naval Safety Center*

Escape scuttles are installed in flush hatches (where specified) in areas such as flight decks, cargo decks, hangar decks, passageways, or other high traffic areas requiring a flush deck to eliminate trip hazards or to maintain a smooth surface. Flush, 25 inch diameter scuttles are also installed in bulkheads, where required, to provide emergency egress routes from a compartment.

Make sure escape scuttles are never blocked by equipment or boxes. Never lock escape scuttles so they cannot be opened from the inside. Install a label plate on the top of all escape scuttles or on the bulkhead near the escape scuttle with one inch red letters stating:

**“WARNING – ESCAPE  
SCUTTLE – DO NOT BLOCK  
OR OBSTRUCT.”**

Walk along your escape route and remove all items that are, or in an emergency could be, blocking the scuttle. This needs to be done before you become that Sailor that we all read about in a summary of mishaps message.

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**DON'T BE A HAZARDOUS  
TRENDSETTER**

*By HMC(SW/AW/FMF) Randahl Benson  
Naval Safety Center*

Keep your trendsetting to your civilian clothes... I have noticed a couple trends recently while surveying NAVOSH and medical programs onboard ships:

**Respiratory Protection.** Respirators are being improperly maintained and stowed (e.g., in paint lockers, hazmat lockers and other improper locations). The respirator cartridges are designed to filter out or absorb contaminants as the air passes through and will protect the user for a limited time. When stowed improperly, the cartridges lose their effectiveness and will no longer protect the user. The Respiratory Protection Manager must ensure that divisions with custody of their own respiratory protection equipment must have controls in place to monitor and ensure proper storage (e.g., in a sealed plastic bag, outside of the contaminated area).

Ref: 5100.19E, Series B0602

**Sight Conservation.** Many eyewash stations are missing dust caps and have brown water coming out of them. Eyewash station maintenance is a

quarterly PMS check. Eyewash stations need to 0.4 gpm of clean water to aid in the removal of foreign objects from the eye. If the eyewash station is missing dust caps or the water comes out discolored, it is essential that they are serviced more frequently than the minimum required PMS. It is also important to ensure that the eyewash station is not obstructed in any fashion and can be reached within 10 seconds from any eye hazardous area.

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**NSTM 300 Rev 8: New “Electrical Bible” Coming Soon**

*By EMCM (SW/AW) Jim Burke,  
Naval Safety Center*



12 cal/cm<sup>2</sup> face-shield

After 3 years of deck plate and technical community input, the newly revised NAVSEA Technical Manual 300 (Revision 8) is scheduled for release late 2011. This effort has been a combined input from NAVSEA 05Z (Technical Warrant Holder), NAVSSES, NSWCCD, Shipyards, PMS Codes, Naval Safety Center, CNSL, CNRP, SUBFOR, AIRFOR and direct input from fleet Sailors. The result is a much easier to read document that is

modernized for current technologies, aligned with civilian industry standards (NFPA 70E) as much as possible and designed for shipboard sailors ease of use. The following are just a few of the new features you'll see in NSTM 300 REV 8:

- New circuit breaker rack out procedures
- New procedures for “IVV” (Initial Voltage Verification)
- Revised energized work criteria and procedures
- New Personnel Protective Equipment (PPE) - face shields and coveralls mandated for electrical work under 1000 volts
- Easy to read charts delineating PPE criteria, requirements and voltage levels for fuse pulling, energized work, breaker rack out, and more
- New criteria for downgrading electrical safe workbenches
- New “medium voltage” safety rules incorporated (above 1000 volts)
- Explanation of arc flash and arc blast theory
- Clearer language of personal, portable and mobile equipment safety checks
- List of stock numbers for all NSTM 300 PPE
- Definitions and criteria for “breaking the plane” and hard-wiring or placing a plug on new equipment
- Revised electrical training section
- Revised statistical data for electrical shocks

The largest change will occur in the area of PPE. New face shields and coveralls (similar to “Bulwark” brand) will be mandated for electrical work under 1000 volts. The new PPE will be rated at 12 cal/cm<sup>2</sup> and each ship will be funded for the initial provision per platform. This PPE aligns with industry standards and will be used in checking for voltage



(IVV) and for use during energized gear work. The “arc flash rating” additionally exceeds fire retardant ratings found in current NOMEX engineering coveralls. Hoods and arc flash suit PPE already exists for voltages in excess of 1000 volts as found on CVN and LHD-8 platforms.

NAVSEA 05Z, CNSL and CNSP have hosted “electrical safety summits” on both coasts that featured new PPE demonstrations, discussions on key changes in the new revision, presentations by Naval Safety Center, briefs on the state of conventional EM training and the way ahead, and a chance for the fleet to ask questions and get answers from the technical community. Both summits were a huge success and shored up lines of communications from the policy makers to the deck plate end user.



12 cal/cm2 coveralls for use with electrical work under 1000 volts

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## **PARASENSE AREA HALOCARBON REFRIGERANT MONITORS AND THEIR COMMON DISCREPANCIES FOUND ON SAFETY SURVEYS.**

*By MMC (SW/AW Esters Wright,  
Naval Safety Center*

To eliminate potential death or injury from exposure to halocarbons in auxiliary machinery rooms, shaft alleys and reefer decks, take heed to below items



## COMMON DISCREPANCIES

1. NO POWER
2. AUDIBLE/VISUAL ALARM SWITCH IS IN THE OFF POSITION
3. SYSTEM OPERATING UNDER FAULT CONDITION

## WHAT TO LOOK FOR WHEN STANDING WATCH

1. A steady green light on front of the panel indicates system is healthy and operating correctly.
2. When a fault is detected, the green light on the panel will flash indicating "system fault" status.
3. After 18 month of operation, the monitor will report one of the following messages "calibration check required", "recalibration required" or "service required". These fault messages can only be cleared by qualified personnel replacing the unit's STYX module.
4. If messages observed on any Parasense monitor display screen indicates a refrigerate leak or other functional problem, exercise appropriate personnel protective measures and notify supervisors immediately.

PMS: MIP 4361/028 TECHNICAL MANUAL: NAVSEA TM **S9514-FL-MMA-010** Parasense Leak Monitoring System

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## Oil Spill Kits

By GSCS (SW) Esworth Carty  
Naval Safety Center

Does your ship have the required number of MARK II oil spill clean-up kits on board?

Are MARK II kits fully stocked and accessible for quick use, inspected monthly and replenished as required? It is vital that you are aware of the contents of the kit so your monthly inventory is accurate and complete.

Per NSTM 593, the following are required for this kit:

ITEMS	NSN	QUANTITY
Rope, 50 FT	9Q 4020-00-968-1350	2
Snap Hook	9Z 5340-00-275-4584	4
Steel Box	9C 2540-00-348-7792	1
Sorbent Sweep	9G 9330-01-281-46084	

However, there have been two recent modifications to **AEL 2-550024006** in March and December 2010. The contents of this kit have now been expanded to include 28 separate items. So if you only have the items listed in the NSTM, you are not in compliance with the AEL as the NSTM has not yet been updated to reflect the changes.

Does the ship have an oil spill contingency plan that has been tailored to the ship? This is a requirement Per OPNAVINST 5100.19E.

Remember, this is a kit you never want to use, but it is critical that it be available and fully stocked if it is needed. Be safe out there and I'll see you in the Fleet.

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## **CALCIUM HYPOCHLORITE AND DECON STATION REQUIREMENTS**

By CDR Dave Horn  
N416 Force Safety Officer

Calcium hypochlorite is a disinfectant agent used on ships for emergency purification of potable water and biological and chemical (B/C) agent decontamination. It is an extremely strong oxidizer and will react with rags, fabrics, antifreeze, ammonia, paint, oil, grease, detergent, acid, and alkalis. When heated, calcium hypochlorite decomposes to chlorine gas, phosgene, and other toxic and corrosive gases. Accidental contact with moisture causes formation of toxic chlorine gas. Additional handling and use practices are provided in NSTM 470 Shipboard Biological Warfare / Chemical Warfare Defense and Countermeasures, and NSTM 533 Potable Water Systems.

There are three AELs that cover CBR Casualty Decontamination Station Equipment AEL 2-770004290/4252/4253. The total allowance for decontamination station equipment, including calcium hypochlorite, is the sum of allowances found on all three AELS. There is also a table in NSTM 470 that list calcium hypochlorite amounts for ships. AEL's take precedence over NSTMs and in this case the three AELs specify the amount of calcium hypochlorite required. For most surface ships the amount they are required to carry has been lowered (for example, a DDG from 144 to 104 bottles). NSTM 470 is currently being updated and the existing table will be removed. The following summary is provided for the calcium hypochlorite requirements on the three AELs.

### Calcium Hypochlorite Requirement

<u>No. Bottles</u>	<u>Ships</u>
• 52	PC, MCM, LCS1, 3 and higher
• 104	LCS 2, FFG, DDG, CG, LPD 7-9 & 15, AS
• 156	LCC 19 and 20
• 208	CVN 65, CVN 68-72, LSD 41-43 (AELs 4252 & 4253)
• 226	LPD 17 class (AELS 4290 and 4252) and LHA class (AELS 4290 and 4253)
• 260	LSD 44-48, LSD 49-52 (AELs 4252 & 4253)
• 330	LHD Class (AELS 4290, 4252, and 4253)
• 416	CVN 73-77

A revision to AEL 4253 is expected in spring 2012 that will reduce the amount of calcium hypochlorite for PCs to 36 bottles.

In addition, the contract for calcium hypochlorite bottles has been changed to require the expiration date on the bottle label and eliminate the seven inch tall bottles which would not fit in the calcium hypochlorite lockers. Ships that receive the seven inch bottles should work with their CHRIMP Techs and submit a supply discrepancy report SF-364 through their supply department to DLA. Each ship needs to submit an SDR utilizing the proper discrepancy code P201 for the container size and / or P306 for omitted or in legible description (shelf life, cage or

manufacturer data missing). NAVSUP is still working on the resolving the issue of the expiration date not on the bottle label. Until then please make sure that folks receiving calcium hypochlorite verify that the expiration date is received with the calcium hypochlorite bottles and if not then a supply discrepancy report should be submitted.

Ready-use calcium hypochlorite issued to Medical and Engineering Departments shall be stored in a locked box mounted on a bulkhead. No more than 48 six-ounce bottles shall be stored in any one locker. A metal box, such as a first aid locker (NSN 1H 2090-00-368-4792), is recommended. Ships should ensure that they have sufficient lockers to store the amount of calcium hypochlorite they are required to carry. A minimum of at least three 1/4-inch vent holes shall be drilled in the bottom of the box to allow release of any chlorine products. The box is to be painted gray. All calcium hypochlorite storage spaces, lockers, and cabinets shall be labeled with red letters on a white background. Flammable Liquid or Corrosive commercial lockers shall not be used to store calcium hypochlorite.

One of the major problems found on safety surveys is that PMS is not being conducted or is conducted improperly. Ships should ensure PMS MIP 6521/601 is conducted quarterly as required.

Calcium hypochlorite storage shall be in well ventilated areas. Calcium hypochlorite shall not be stored in machinery spaces, storerooms, flammable liquid or compressed bottle stowage areas, HAZMIN Centers, berthing spaces, or oil and water test laboratory areas. Storage shall not be in areas used for stowage of greases, oils,

paints, or other combustible materials. Calcium hypochlorite lockers shall be away from oil lines and other potential sources of combustible material, and at least 5 feet from any source or surface which may exceed 51.7°C (125°F). Storage areas shall not be subject to condensation or water accumulation. To help reduce off gassing of chlorine gas individual six-ounce bottles may be put in a plastic bag and sealed (zipped) shut.

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